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ABSTRACT

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Attrition, Failure and Attribution Among Adult Learners[1]

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Abstract

Using Attribution Theory, this study examined the effect of exam failure on attrition. Previous Attribution Theory studies indicate that while ascription of failure to lack of ability leads to abandoning the activity, ascription to lack of effort does not necessarily lead to the same outcome. It was, therefore, hypothesized that lower ability failers would be more likely to dropout than higher ability failers. Data analysis of CLU students' records and questionnaires revealed that although failure generally tends to lead to attrition, it does so significantly more for lower rather than higher ability students.

Attrition, Failure and Attribution Among Adult Learners

Although many research attempts have been undertaken to study the attrition or drop-out problem, much of what has been written in recent years is limited to high school and undergraduate levels in traditional educational institutions (Langlois, 1972). Studies for various adult programs have indicated that attrition rates could vary anywhere between 40 and 85 percent (Sainty, 1971). Despite such an alarming rate, research activity about adult attrition has been lacking in general, with some scattered work surfacing occasionally (Londoner, 1972). In these studies the individual's academic performance is repeatedly found as the most crucial factor in determining attrition. Thus, Lavin and Jacobson (1973) found that the more credits a student earns the less likely is he to drop out. Taking the grade point average as another index of performance, they found that the same relationship between attrition and performance still holds. In a similar study, Thayer (1973) found that students who receive D's and F's in a traditional grading system and those who fail in a pass/fail system dropped out significantly more than other students. Several models and theories were advanced to explain this relationship (Boshier 1973; Lam & Wong, 1974; Londoner, 1972). In a recent article, Tinto (1975) offers two possible explanations, one in terms of Durkeim's "suicide" theory, the other in terms of a cost-benefit economic approach. Adapting Durkheim's theory to the attrition problem, he argues that, although a person can conceivably be integrated into the social domain of the college, and thereby become committed to the institution, he may

still drop out from insufficient integration in the academic domain through poor grade performance. Looking at it from a cost-benefit viewpoint, he claims that individuals will direct their activities toward those areas of endeavor which are perceived to maximize the ratio of benefits to costs; hence, a person will tend to withdraw from college when he perceives that an alternative form of time involvement, energies, and resources will yield greater benefits, relative to costs, than staying in college does. Referring to a 1955 study by Sarnoff and Raphael, he states that failing students were unable to see their college experience as a process of intellectual benefit and, therefore, tended to drop out. To further highlight this debilitating effect of poor performance, other recent studies (Morstain & Smart, 1974; Schaumburg, 1973; Willet, 1973) have shown that a certain percentage of students indicated that poor grades are an important reason for dropping out.

While the finding that poor performance carries a major negative impact on attrition is not questionable, studies reporting it suffer from two main weaknesses. First, they fail to indicate conditions and/or variables that may moderate this effect; for example, poor performance may affect attrition depending on whether the person perceives it to be indicative of his future performance (Brickman, Linsenmeier, & McCareins, 1976). Second, these studies do not show the percentage of poor performers who report that poor grades are an important reason for dropping out; instead, the percentages are those of all students regardless of performance and attrition. The present study, only part of a larger attrition study at The American College, is an attempt at exploring these two issues.

The study approaches the attrition problem from the Attribution Theory point of view. While this theory is basically concerned with the investigation of the perception of causality (Weiner, 1972), a related concept is the perception of responsibility whereby the allocation of responsibility bears a direct effect on determining or, at least guiding, subsequent behavior (Reisman & Schopler, 1973). Attribution studies have demonstrated that while the ascription of failure to lack of ability tends to make the person terminate or avoid the activity, ascription to lack of effort does not necessarily lead to this outcome. This is so because, unlike ability, effort is commonly considered flexible, and thus highly controllable so that one can augment it (Potepan & Weiner, 1970). Also, these studies have shown that where those with low ability have a strong tendency to attribute failure to ability, those with high ability tend to attribute it to effort. Therefore, it is expected from this that persons, low and high in ability, would exhibit differential persistence of behavior in the case of failure. Based on this, it was hypothesized in this study that, although failure leads to attrition in general, it does significantly more so among low than high ability persons. Thus the main variables are attrition as the dependent variable, exam performance as the independent variable, and ability as the moderator variable. To investigate this further, the hypothesis that, for exam failers, the lower the ability, the higher the tendency to attribute attrition to failure was tested. In this case, ability is the independent variable and attribution of attrition to failure is the dependent one.

Method

Attrition was defined in the study as the absence of educational involvement or exam taking for a period of at least one year, and the formal educational level was used in the analysis as an ability index. The data was based on adult learners engaged in the Chartered Life Underwriter (CLU) program of The American College. It was obtained from two sources: 1) The College's files of all candidates who matriculated with the College during 1971-'72 period and who took the 1972 exams (N = 5,775). To examine the first hypothesis, their 1973 educational involvement was tested with respect to their 1972 exam results, and 2) to test the second hypothesis, a questionnaire entitled "The Chartered Life Underwriter Descriptive Questionnaire" was mailed to a random sample of 1972 exam takers who did not take any of the 1973 exams and thus evidenced no educational involvement (attrition) for a year (N = 400). This sample included only those students who had failed all exams taken in 1972 and who held only a high school or a college graduate degree. The "Some College" educational level was excluded because of its imprecise nature. Of these, 250 questionnaires were returned. An item relevant to exam results, in relation to attrition, was included in the questionnaire. The item asked the subject to check, from a list of alternatives, the most important reason for his decision not to sit for any of the 1973 exams. One of these alternatives read, "My performance on previous exam(s)."

Results

Using the chi square test as an appropriate statistic, data analysis supported the two hypotheses in the study and indicated that although failure has a strong effect on attrition, this effect is significantly more pronounced for low than high ability students. Treating the students'

records as a sample in time, the chi square test showed a significant relationship between exam performance and educational involvement (χ^2 = 1237.31, df = 2, p < .001). Thus, consistent with the previously mentioned literature, and as shown in the following figure (Figure 1), this result shows that poor performance is an important factor in attrition (total attrition = 40%):

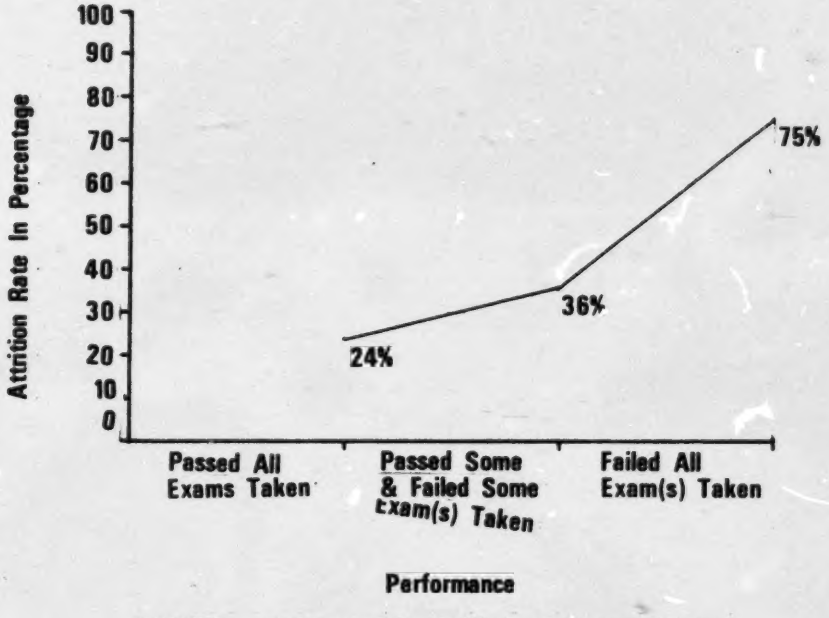

FIGURE 1. EXAM PERFORMANCE AND ATTRITION

To test for the differential or moderating effects of ability on attrition under different conditions of performance, a three-way factorial chi square analysis (Winer, 1971) was applied on the data with two levels for each factor: attrition-persistence for educational involvement, pass-fail for exam performance, and low-high for ability (N = 3720; passed some and failed some exams, and the some college formal education were excluded from the analysis because of their imprecise nature).

All interaction effects were significant and indicated that a) the passing rate was significantly higher for high than low ability students (χ^2 = 892.34, df = 1, p < .000), b) attrition rate was significantly higher for low than high ability students (χ^2 = 393.39, df = 1, p < .000), c) attrition rate was significantly higher for failers than passers (χ^2 = 1041.14, df = 1, p < .000), and d) the relationship between performance and attrition is significantly modified by ability (χ^2 = 151.33, df = 1, p < .000). This finding, shown in the following figure (Figure 2), is the central concern of this study:

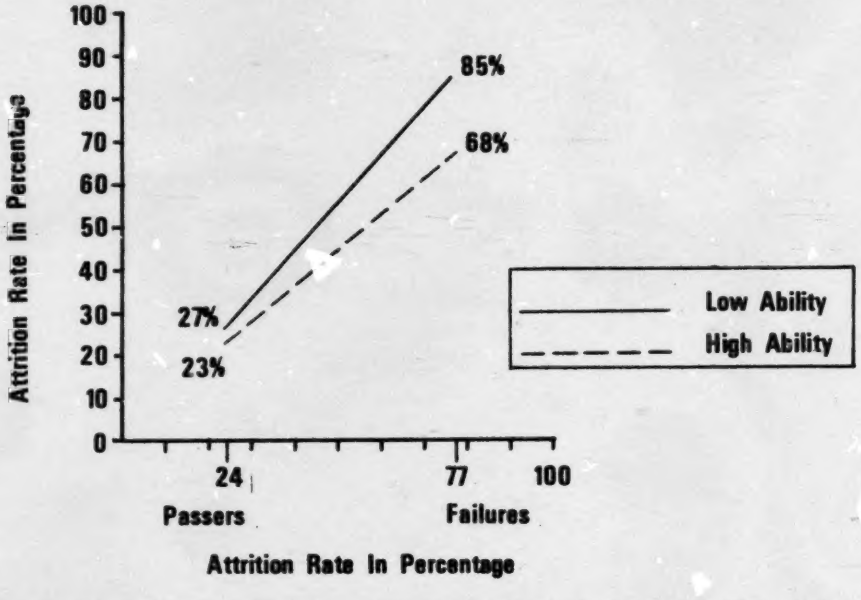

FIGURE 2. ATTRITION AS A FUNCTION OF PERFORMANCE AND ABILITY

Testing for simple effects revealed that low ability failers have a significantly higher rate of attrition than high ability failers (χ^2 = 50.45,

df = 1, p < .000); whereas, for passers, the attrition rate is not differentially affected by different ability levels (χ^2 = 2.00, df = 1, p < .50). These rates may be seen in Figure 2.

The chi square test for the questionnaire results showed that the attribution of attrition to failure was significantly higher for the low than the high ability subjects (χ^2 = 30.08, df = 1, p < .000) as seen in the following table (Table 1):

Table 1

Attrition Attribution to Failure by Ability

Ability	Main Reason for Attrition: Performance on Previous Exam(s)	Other	Total
Low	101 (67%)	49 (33%)	150 (100%)
High	32 (32%)	68 (68%)	100 (100%)
Total	133 (53%)	117 (47%)	250 (100%)

It is noteworthy that a total of 53% of dropout poor performers attributed their withdrawal from the program to failure; whereas, due to improper research methodology, the highest reported by other researchers is only 12% (Willet, 1973).

Discussion

The results of the present study, while supporting the general claim that poor performance is a crucial factor in determining attrition, confirm the study's contention that the relationship between these two variables is significantly tempered by ability. Thus, low as compared to high ability

poor performers have a significantly higher attrition rate, as well as a significantly higher tendency to attribute attrition to poor performance. These results are explained in terms of the Attribution Theory which argues that the individual usually takes actions appropriate to the meaning his causal interpretation gives to his own behaviors, thus affecting his decision-making policy (Kelley, 1973). Thus a low ability student, interpreting his poor performance to be due to a lack of the stable ability characteristic, decides to drop out; whereas, a high ability student, attributing the same quality performance to a lack of the flexible effort characteristic, decides to persist. Regardless of what explanation one may choose, the fact remains that poor performance, particularly among low ability persons, does have a strong effect on a student's decision to dropout. Moreover, a solution to this problem is vital particularly in adult non-traditional educational programs where the drop-out rate is significantly high and where industry has been heavily investing in such programs. In fact, it is reported that, by the mid-1960s, an estimated $17 billion were allocated by various industries for educational programs as a remedy for overcoming obsolescence and for raising job performance and morale (Kaufman, 1974).

Although the solution is complex, two approaches may be used, remedial and preventive. In general, the remedial applies some form of "corrective" techniques to help students overcome some defficiency (failure in this case). The preventive approach, on the other hand, employs some measure to impede an event (attrition in this case) by interposing a hindrance in advance. Traditional educational institutions

have employed both approaches. Remedial measures have varied all the way from offering remedial courses to individual psychological counseling. Preventive measures have mainly been limited to selecting the desired type of students. Non-traditional educational institutions, however, cannot adopt such measures because of their unique settings. It would be extremely difficult, for example, to offer remedial courses or effective counseling to self-studiers or correspondence students. Moreover, it is noteworthy that remedial courses used by the City University of New York (CUNY), which follows an open-admission policy, have shown no evidence that remediation was effective in reducing attrition (Lavin & Jacobson, 1973).

For these, and other reasons, the preventive approach seems more practical in non-traditional institutions. First, it is easier to set up and apply. Second, it tends to cover a much wider range of drop-outs. Although this approach directly refers to changes in the institution's policy, some researchers in this area have recommended it. Some have argued (Langlois, 1972) that preventive measures could be used to lower the attrition rate by treating some factors over which the institution has control, basically its program and policies; others (Willet, 1973) have recommended that, to re-attract non-persisting students, new offerings could be created. This approach, with the exclusion of the selectivity admission measure, is favored by the author.

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